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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,049	12/17/2001	Michael Ficco	PD-201139	2100
20991 7590 12/12/2007 THE DIRECTV GROUP, INC. PATENT DOCKET ADMINISTRATION CA / LA1 / A109 P O BOX 956 EL SEGUNDO, CA 90245-0956			EXAMINER HOSSAIN, FARZANA E	
			ART UNIT 2623	PAPER NUMBER
			MAIL DATE 12/12/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/022,049	FICCO ET AL.	
	Examiner	Art Unit	
	Farzana E. Hossain	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-19 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-19 and 21-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/15/2007 has been entered.

Response to Amendment

2. This office action is in response to the amendment filed on 10/15/2007. Claims 1, 8, 16, 23 and 32 are amended. Claims 2, 3, 7, 9-15, 17-19, 22, 24, 25, 27-30 are original. Claims 4, 6, 21, 26 and 31 have been previously presented. Claims 5, 20 are cancelled.

Response to Arguments

3. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

4. Claim 23 is objected to because of the following informalities: The applicant did not amend Claim 23 to remove the same limitation that is now present in Claim 16.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 6-8, 10, 11, 16-19, 21-23, 25, 26, 31/16-19, 21-23, 25, 26, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatt (US 2002/0073426) in view of Trovato et al (US 6,445,306 and hereafter referred to as "Trovato") and Milillo et al (US 6,834,325 and hereafter referred to as "Milillo").

Regarding Claims 1, 16, 31/16, Bhatt discloses a system and method for organizing data for use by an application: a set top box or receiver (STB) (Figure 1, 100) including a physical memory or DRAM (Figure 1, 186), a mass storage device or hard drive (HD) (Figure 1, 174), and a processor or central processing control (CPU) (Figure 1, 188) operatively connected to the physical memory and mass storage device for implementing the application (Page 2, paragraph 0026-0027), wherein the physical

memory and the mass storage device are configured to store the data (Page 2, paragraph 0021), wherein the processor controls storage and manipulation of the data between the physical memory and the mass storage device so that data to be used by the application is available for immediate access from the physical memory (Page 2, paragraphs 0022, 0026-0028, 0030). Bhatt discloses that the data is sorted (Page 3, paragraphs 0031-0032, Figure 4) between preferred data or data most likely to be immediately accessed for an application and remaining data or data that is most likely to be accessed in the more distant future, the preferred data or data likely to be immediately accessed being stored in the DRAM or physical memory and the remaining data or data most likely to be accessed in the more distant future is stored in the HD (Pages 2-3, paragraphs 0022, 0029-0031). Bhatt discloses updating preferred data via an algorithm so that the most up-to-date preferred programming is stored in the physical memory (Page 2, paragraph 0022, Figure 4, 440). Bhatt discloses temporally sorting data and storing data (Figure 3, 306, 316, Page 3, paragraph 0032). Regarding Claim 31, Bhatt discloses the STB or computer readable medium has (Figure 1, 100) has a processor (Figure 1, 188) with programs for executing various data processing and other types of data based (Page 2, paragraphs 0026-0027) and the STB receives and organizes the data (Figure 1, Figure 3, Figure 4). Bhatt discloses the CPU controls the EPG data so that only the preferred data is accessed rapidly (Pages 2-3, paragraphs 0030-0032). Bhatt discloses that storage of the data is based on most preferred programming or common usage scenarios when determining what EPG information to display (Pages 2-3, paragraphs 0029-0031) and that the CPU can adjust and control

matches for preferred data or most common usage if a match is found between upcoming programming and preferences (Page 3, paragraph 0032), or the CPU can manipulate data if there are usage scenarios.

Bhatt is silent on the processor comparing a current time to a time associated with the data for preferred programming. Bhatt discloses preferred programming that is most likely to be accessed immediately but does not explicitly disclose usage scenarios resulting in a cache miss or cache miss prediction. In analogous art, Trovato discloses that the processor directs data to be compared by a current time to a time associated with the data for preferred programming and not preferred programming or based upon the current time the most preferred programming data is updated (Column 5, lines 59-67, Column 6, lines 1-7, Column 8, lines 10-21). In analogous art, Milillo discloses wherein the processor controls storage and manipulation of the data so that necessary or relevant parts of the data may be accessed as the processor detects usage scenarios likely to result in a cache miss or when cache miss is not predicted (Column 6, lines 6-17, 65-67, Column 7, lines 1-17, Column 8, lines 32-41). Therefore, it would have been obvious to one of ordinary skill in the art to modify Bhatt to include processor directs data to be compared based on a current time to a time associated with the data for preferred programming and not preferred programming (Column 5, lines 59-67, Column 6, lines 1-7, Column 8, lines 10-21) as taught by Trovato in order to efficiently provide the user with programming for current interests for the user's convenience (Column 1, lines 54-67, Column 2, lines 18-22) as disclosed by Trovato. Therefore, it would have been obvious to one of ordinary skill in the art to modify the combination to

include wherein the processor controls storage and manipulation of the data so that necessary or relevant parts of the data may be accessed as the processor detects usage scenarios likely to result in a cache miss or when cache miss is not predicted (Column 6, lines 6-17, 65-67, Column 7, lines 1-17, Column 8, lines 32-41) as taught by Milillo in order to improve the system's ability to anticipate the needs of future memory accesses prior to the access of data (Column 3, lines 5-17) as disclosed by Milillo.

Regarding Claim 32, Bhatt discloses a system and method for efficient storage of including electronic program guide (EPG) data for use by an application: a set top box or receiver (Figure 1, 100) including a physical memory or DRAM (Figure 1, 186), a mass storage device or hard drive (HD) (Figure 1, 174), and a processor or central processing control (CPU) (Figure 1, 188). Bhatt discloses EPG information to be stored on the HD and that there is an algorithm that matches the preferred or immediately displayable data needed in order to add the EPG data from the HD to the DRAM or the CPU controls the data processes including adding data from the mass storage device to the DRAM (Page 2, paragraph 0026, Page 3, paragraph 0031) and updating the data in the HD and DRAM and the data is updated in both HD and then matched with the algorithm for the DRAM for updating the DRAM so the data used by the application for EPG is rapidly accessed, (Pages 2-3, paragraphs 0021, 0029-0031) and that data is removed from HD to DRAM so that desired data has rapid access (Page 2, paragraph 0022) and data is removed from DRAM if it is data that does not need rapid access (Page 2, paragraph 0022), which reads on that the data is removed from the HD and DRAM so as to ensure data used by application can be accessed from the physical

memory without delay. Bhatt discloses that the data is sorted and stored (Page 3, paragraphs 0031-0032, Figure 4) between preferred data or data most likely to be immediately accessed for an application and remaining data or data that is most likely to be accessed in the more distant future, the preferred data or data likely to be immediately accessed being stored in the DRAM or physical memory and the remaining data or data most likely to be accessed in the more distant future is stored in the HD (Pages 2-3, paragraphs 0022, 0029-0031). Bhatt discloses updating preferred data via an algorithm so that the most up-to-date preferred programming is stored in the physical memory (Page 2, paragraph 0022, Figure 4, 440). Bhatt is silent on the processor directing the data to be compared based on a current time to a time associated with the data for preferred programming. Bhatt discloses preferred programming that is most likely to be accessed immediately but does not explicitly disclose usage scenarios resulting in a cache miss or cache miss prediction. In analogous art, Trovato discloses that the processor directs data to be temporally sorted by comparison of a current time to a time associated with the data for preferred programming and not preferred programming or based upon the current time the most preferred programming data is updated (Column 5, lines 59-67, Column 6, lines 1-7, Column 8, lines 10-21). In analogous art, Milillo discloses wherein the processor controls storage and manipulation of the data so that necessary or relevant parts of the data may be accessed as the processor detects usage scenarios likely to result in a cache miss or when cache miss is not predicted (Column 6, lines 6-17, 65-67, Column 7, lines 1-17, Column 8, lines 32-41). Therefore, it would have been obvious to one of ordinary skill in the art to modify

Bhatt to include processor directs data to be compared based on a current time to a time associated with the data for preferred programming and not preferred programming (Column 5, lines 59-67, Column 6, lines 1-7, Column 8, lines 10-21) as taught by Trovato in order to efficiently provide the user with programming for current interests for the user's convenience (Column 1, lines 54-67, Column 2, lines 18-22) as disclosed by Trovato. Therefore, it would have been obvious to one of ordinary skill in the art to modify the combination to include wherein the processor controls storage and manipulation of the data so that necessary or relevant parts of the data may be accessed as the processor detects usage scenarios likely to result in a cache miss or when cache miss is not predicted (Column 6, lines 6-17, 65-67, Column 7, lines 1-17, Column 8, lines 32-41) as taught by Milillo in order to improve the system's ability to anticipate the needs of future memory accesses prior to the access of data (Column 3, lines 5-17) as disclosed by Milillo.

Regarding Claims 2, 17, 31/17, Bhatt, Trovato and Milillo disclose all the limitations of Claims 1, 16, 31/16. Bhatt discloses that the CPU controls at least one process to add data from the HDD to the physical memory to maintain the amount data need for the EPG application (Page 2, paragraphs 0022, 0029-0031, Figure 4).

Regarding Claims 3, 18, 31/18, Bhatt, Trovato and Milillo disclose all the limitations of Claims 2, 17, 31/17. Bhatt discloses the CPU or processor in a set top box (Figure 1, 188) comprises an algorithm that matches the preferred or displayable data needed in order to add the EPG data from the HD to the DRAM or the CPU controls the data processes including adding data from the mass storage device to the DRAM (Page

2, paragraph 0026, Page 3, paragraph 0031). Bhatt discloses updating the data in the HD and DRAM every day or after the daily download and the data is updated in both HD and then matched with the algorithm for the DRAM for updating the DRAM so the data used by the application for EPG is rapidly accessed, (Pages 2-3, paragraphs 0021, 0029-0031) and that data is removed from HD to DRAM so that desired data has rapid access (Page 2, paragraph 0022) and data is removed from DRAM if it is data that does not need rapid access (Page 2, paragraph 0022), which meets the limitation that the data is removed from the HD and DRAM so as to ensure data used by application can be accessed from the physical memory without delay.

Regarding Claims 4, 19, 31/19, Bhatt, Trovato and Milillo disclose all the limitations of Claims 3, 18, 31/18. Bhatt discloses that the processes are controlled by the operating system so the CPU can run algorithms the data is transferred to the DRAM so that preferred EPG data is produced without delay or so that these processes do not interfere with running the application of the EPG (Page 2, paragraph 0026, Page 3, paragraph 0031).

Regarding Claims 6, 21, 31/21, Bhatt, Trovato and Milillo disclose all the limitations of Claims 1, 16, 31/16. Bhatt discloses that the processor runs the application with the preferred programming information stored in the physical memory (Pages 2-3, paragraphs 0029-0030) and that the preferred programming information is only needed to run the application without having to access the data stored in the HDD (Pages 2-3, paragraphs 0029-0030).

Regarding Claims 7, 22, 31/22, Bhatt, Trovato and Milillo disclose all the limitations of Claims 1, 16, 31/16. Bhatt discloses that the processor controls the storage and manipulation of the data (Pages 2-3, paragraphs 0022, 0026, 0028-0030) and the storage of the data so that the size of the DRAM is configured on up to 14 days of programming information or the most preferred programming data when displaying the EPG or so that the size of the physical memory is configured based on a temporal window of common usage scenarios employing the data (Pages 2-3, paragraphs 0029-0032).

Regarding Claims 8, 23, 31/23, Bhatt, Trovato and Milillo disclose all the limitations of Claims 1, 16, 31/16. Bhatt discloses storing most preferred data or data that is immediately needs to be accessed in physical memory and data that will not need to be immediately accessed in a hard drive (Pages 2-3, paragraphs 0028-0032) and accessing data in the EPG (Figure 3, Figure 4). Trovato discloses the user scrolling in the program guide or looking ahead for a longer term view of program list (Column 9, lines 55-65, Figures 6, 7). Milillo discloses a client request data and client likely needing data that is currently not stored in cache memory (Column 8, lines 25-55). See rejection of Claims 1, 16, 31/16.

Regarding Claims 10, 25, 31/25, Bhatt, Trovato and Milillo disclose all the limitations of Claims 1, 16, 31/16. Bhatt disclose the physical memory comprises a RAM or DRAM (Figure 1, 186).

Regarding Claims 11, 26, 31/26, Bhatt, Trovato and Milillo disclose all the limitations of Claims 1, 16, 31/16. Bhatt discloses that the mass storage device comprises a hard disk or hard drive (Figure 1, 174).

7. Claims 9, 12-15, 24, 27-30, 31/24, 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatt in view of Trovato and Milillo as applied to Claims 1, 16, 31/16 further in view of Hofmann (US 5,883,677).

Regarding Claims 9, 24, 31/24, Bhatt, Trovato and Milillo disclose all the limitations of Claims 1, 16, 31/16. Bhatt discloses a service providing transmitting program guide data (Figure 1, Page 2, paragraph 0021). Bhatt and Trovato are silent on the EPG for a plurality of sources. Hofmann discloses a system where EPG data is stored in one mass storage device or buffers (Figure 4B, 420) that receives program information from multiple sources or an EPG for a plurality of sources (Figure 4B, Column 3, lines 20-41) and that the integrated or preferred data to be displayed is transferred to a merged database (Figure 4B, 424). Therefore, it would have been obvious to one of ordinary skill in the art to modify the combination to include that the EPG is for a plurality of sources (Figure 4B, Column 3, lines 20-41) as taught by Hofmann in order to make it more convenient to a user who has multiple services (Column 2, lines 16-22) and to be able receive, organize and display information for services from multiple sources (Column 1, lines 10-14) as disclosed by Hofmann.

Regarding Claims 12, 27, 31/27, Bhatt, Trovato, Milillo and Hofmann disclose all the limitations of Claims 9, 24, 31/24. Bhatt discloses a communications channel

(Figure 1, Page 2, paragraph 0021). Hoffman discloses that there is communications channel configured to transmit the EPG data to the set top box (Figure 4B, 310, 318, 314).

Regarding Claims 13, 28, 31/28, Bhatt, Trovato, Milillo and Hofmann disclose all the limitations of Claims 12, 27, 31/27. Hoffman discloses that the communications channel is satellite communications (Figure 4B, 318), a cable communications channel (Figure 4B, 310).

Regarding Claims 14, 29, 31/29, Bhatt, Trovato, Milillo and Hofmann disclose all the limitations of Claims 9, 24, 31/24. Hofmann discloses that the program guide is configured to display the EPG data on a display unit coupled the broadcast receiving unit in tabular form including program time, channels, and program identification (Figure 4B, 426, Figure 2, 212, Figure 9A).

Regarding Claims 15, 30, 31/30, Bhatt, Trovato, Milillo and Hofmann disclose all the limitations of Claims 14, 29, 31/29. Trovato discloses program identifications include ratings (Column 9, lines 18-20). Hofmann discloses that program identifications or attributes include information about cost for pay per view (Figure 9A).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farzana E. Hossain whose telephone number is 571-

Application/Control Number:
10/022,049
Art Unit: 2623


Page 13

272-5943. The examiner can normally be reached on Monday to Friday 7:00 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FEH
December 7, 2007


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